# MiSP Motion Assessment L3

Name: _____ Date: _____

For questions 1–4, show the formula, the substitution, and the final answer.

1. Calculate the speed of a car that went a distance of 125 miles in 2 hours' time.

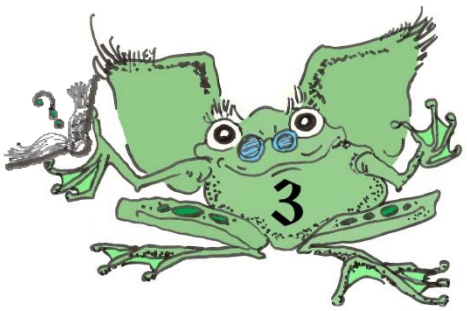
| Formula | Substitution | Final Answer |
|---|---|---|
| | | |

2. A baseball is thrown a distance of 20 meters in 0.5 seconds. What is the speed of the baseball?

| Formula | Substitution | Final Answer |
|---|---|---|
| | | |

3. How much time does it take for a bird flying at a speed of 65 kilometers per hour to travel a distance of 3,000 kilometers?

| Formula | Substitution | Final Answer |
|---|---|---|
| | | |



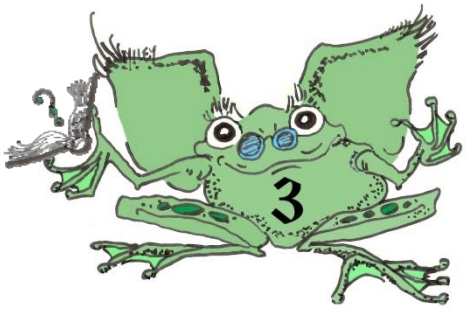
4. A comet is cruising through the solar system at a speed of 50,000 kilometers per hour for 4 hours' time. What is the total distance traveled by the comet during this time?

| Formula | Substitution | Final Answer |
|---|---|---|
| | | |

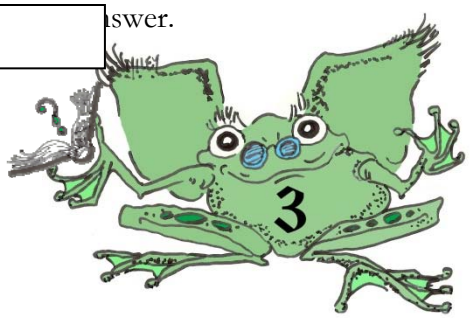
5. A car traveled a total distance of 200 kilometers in 2 hours. The data table below shows the car's distance from the starting location at 0.5-hour intervals during the trip.

| Time (hours) | Distance (kilometers) |
|---|---|
| 0.0 | 0 |
| 0.5 | 50 |
| 1.0 | 100 |
| 1.5 | 150 |
| 2.0 | 200 |

Plot the time and distance on the grid on the next page.



6. Calculate the speed [ ] swer.



7. Calculate the slope of the line using two ordered pairs on the line.

Ordered Pairs: _____ _____

$(x_1, y_1)$ and $(x_2, y_2)$

Formula for the slope of a line =

Calculation:

Slope = _____

8. What would be the approximate distance the car traveled in 3.5 hours?

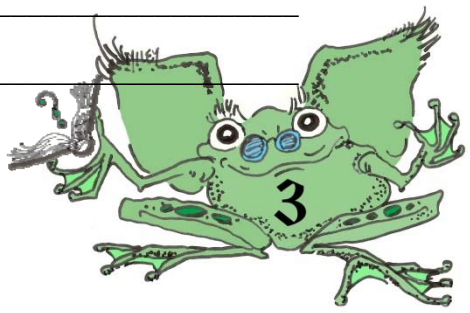
Calculation:

Distance =

9. Is this car traveling at a constant speed? _____ How do you know?

_____

_____



10. What is the *y*-intercept of the line? _____

11. Using the slope and the *y*-intercept, determine the equation of this line. Include the formula for a line in your answer.

12. Using this equation of the line, calculate how far the car would travel in 3.5 hours. Show all of your work!

13. Another car is traveling at a slower speed. Draw a line on your graph that could represent the speed of the second car. Label this line "second car."